WHAT IS CLAIMED IS:

1. A method of performing a chemical or biochemical protocol comprising:

cycling at least one thermal transfer member between at least two temperatures while liquid samples on which said chemical or biochemical protocol is to be performed are continuously moving through at least one temperature regulated zone upon which said at least one thermal transfer member acts.

2. The method of Claim 1 wherein said liquid samples move through the temperature regulated zone in sample receiving regions selected from the group consisting of wells, hydrophillic films and hydrophillic filaments.

3. The method of Claim 1 wherein said chemical or biochemical protocol comprises adding at least one reagent to the liquid samples.

4. The method of Claim 1 wherein said cycling between at least two temperatures is repeated 1 to 35 times while said liquid samples are moving through the temperature regulated zone.

5. The method of Claim 1 wherein said chemical or biochemical protocol comprises a nucleic acid amplification procedure.

6. The method of Claim 1 wherein said chemical or biochemical protocol is performed on a plurality of liquid samples arranged in parallel.

7. The method of Claim 1 further comprising detecting the result of said protocol.

8. The method of Claim 1 wherein said chemical or biochemical protocol comprises determining the identity of at least one polymorphic nucleotide.

9. A method for carrying out a chemical or biochemical protocol comprising:

depositing liquid sample volumes into a plurality of sample receiving regions on at least one mobile sample transport member; and

moving the sample transport member along a pathway such that said sample receiving regions move through at least one temperature regulated zone upon which a thermal transfer member acts, wherein said thermal transfer member is capable of cycling between at least two temperatures while said

sample receiving regions are moving through said at least one temperature regulated zone.

10. The method of Claim 9 further comprising adding at least one reagent to the sample receiving regions while the sample receiving regions are moving along said pathway.

11. The method of Claim 9 wherein the sample receiving regions comprise areas on a substrate.

12. The method of Claim 11 wherein the areas on the substrate comprise wells.

13. The method of Claim 12 wherein the sample receiving regions comprise a plate, having a plurality of wells therein, said wells having a thin film on their bottom surfaces.

14. The method of Claim 11 wherein the substrate is a film.

15. The method of Claim 14 wherein a surface of the film is sufficiently hydrophillic to allow adherence of individual liquid sample volumes in the form of droplets on the surface.

16. The method of Claim 14 wherein said film comprises a matrix of hydrophobic areas and hydrophillic areas, said hydrophillic areas being sufficiently hydrophillic to allow adherence of individual liquid samples in the form of droplets on said hydrophillic areas.

17. The method of Claim 11 wherein the substrate comprises a filament.

18. The method of Claim 17 wherein the filament is sufficiently hydrophillic to allow adherence of individual liquid sample volumes in the form of droplets on the filament.

19. The method of Claim 17 wherein the filament is conducting, and the droplets are heated by passing electric current through the filament.

20. The method of Claim 9 wherein said sample transport member moves along said pathway continuously.

21. The method of Claim 9 wherein said sample transport member moves along said pathway in small steps.

22. The method of Claim 9 wherein said sample transport member is moved along said pathway by reels which frictionally engage the sample transport member.

23. The method of Claim 9 wherein the sample receiving regions are covered by a non-miscible liquid in order to prevent evaporation of the liquid sample volumes.

24. The method of Claim 9 wherein the protocol is carried out in a humid atmosphere to prevent evaporation of the liquid sample volumes.

25. The method of Claim 9 wherein one of the at least two temperatures is about 50°C, and another of the at least two temperatures is about 94°C.

26. The method of Claim 9 wherein said thermal transfer member cycles through said at least two temperatures a plurality of times while said sample receiving regions are moving through said at least one temperature regulated zone.

27. The method of Claim 9 wherein said thermal transfer member cycles through said at least two temperatures from about 2 to about 35 times while said sample receiving regions are moving through said at least one temperature regulated zone.

28. The method of Claim 9 wherein the protocol is carried out in only one apparatus.

29. The method of Claim 9 wherein a plurality of sample receiving regions are processed in parallel in said at least one temperature regulated zone.

30. The method of Claim 9 wherein said chemical or biochemical protocol comprises a nucleic acid amplification procedure.

31. The method of Claim 30 wherein said chemical or biochemical protocol comprises a polymerase chain reaction.

32. The method of Claim 30 wherein said chemical or biochemical protocol comprises determining the identity of at least one polymorphic nucleotide in the product of said nucleic amplification procedure.

33. A device comprising:

a substrate comprising regions for receiving liquid samples wherein said liquid samples move along at least one sample pathway; and

at least one thermal transfer member which is capable of cycling between at least two temperatures, said at least one thermal transfer member being adapted to bring at least a portion of said sample pathway to said at least two

temperatures while a sample is continuously moving along said at least a portion of said sample pathway.

34. The device of Claim 33 wherein said substrate comprising regions for receiving liquid samples is selected from the group consisting of substrates comprising a plurality of wells, hydrophillic films and hydrophillic filaments.

35. The device of Claim 33 further comprising at least one reagent supplier.

36. The device of Claim 33 further comprising a detector for determining the result of said protocol.

37. A device comprising at least one mobile sample transport member having sample receiving regions thereon and at least one thermal transfer member which is capable of cycling between at least two temperatures, said at least one thermal transfer member being adapted to allow said sample receiving regions to cycle between at least two temperatures while said sample receiving regions are moving through at least one temperature regulated zone upon which said at least one thermal transfer member acts.

38. The device of Claim 37 further comprising reagent addition members.

39. The device of Claim 37 wherein the sample receiving regions comprise wells.

40. The device of Claim 39 wherein the sample receiving regions comprise a plate, having a plurality of wells therein, said wells having a thin film on their bottom surfaces.

41. The device of Claim 40 wherein the plate is made of a material selected from the group consisting of plastic, silicon and glass.

42. The device of Claim 37 wherein the sample receiving regions comprise a film.

43. The device of Claim 42 wherein a surface of the film is sufficiently hydrophillic to allow adherence of individual liquid sample volumes in the form of droplets on the surface.

44. The device of Claim 42 wherein said film comprises a matrix of hydrophillic areas surrounded by a hydrophobic region, said hydrophillic areas being

sufficiently hydrophillic to allow adherence of individual liquid samples in the form of droplets on said hydrophillic areas.

45. The device of Claim 42 wherein the film is made of a material selected from the group consisting of polyimide, kapton, polycarbonate, PDMS and aluminum.

46. The device of Claim 42 wherein the film has anisotropic thermal conductivity such that the thermal conductivity through a cross section of the film is greater than the thermal conductivity within a plane of the film.

47. The device of Claim 37 wherein said sample receiving regions comprise a filament.

48. The device of Claim 47 wherein the filament is sufficiently hydrophillic to allow adherence of individual liquid sample volumes in the form of droplets on the filament.

49. The device of Claim 48 wherein the filament is electrically conductive, and the liquid sample volumes are heated by passing electric current through said filament.

50. The device of Claim 37 further comprising reels, which move said sample transport member along said pathway by frictionally engaging the sample transport member.